BTL-3000

SERIES OF WHOLE-BODY TUBS
TYPE ALFA

USER'S MANUAL

v100z1RK2003/04/14EN

CONTENTS:

1. INSTRUCTIONS FOR USE 3
1.1 Outward Appearance 4
1.2 Individual Types and Equipment of Alfa Tubs 4
1.3 Control Elements 5
1.3.1 Control Panel Alfa 10-40 5
1.3.2 Control Panel Alfa 50 6
1.4 Operation of Alfa 10-50 Tubs 7
1.4.1 First Start 7
1.4.2 Control of Underwater Massage Alfa 10-50 7
1.4.3 Control of Four-circuit Air Massage System Alfa 20 , Alfa 40 7
1.4.4 Control of Three-circuit Hydromassage System Alfa 30 , Alfa 40 8
1.4.5 "TURBO" Function - Alfa 40 8
1.4.6 Control Panel Alfa 50 9
1.4.7 Control of Four-circuit Air Massage System Alfa 50 10
1.4.8 Control of Three-circuit Hydromassage System Alfa 50 11
1.4.9 Data on the Digital Display Alfa 50 11
1.5 Optional Supplementary Systems and Accessories 12
1.5.1 Disinfection 12
1.5.2 Light 12
1.5.3 Electric Heating 12
1.5.4 Filtration 13
1.5.5 Preparation for Connection to Recycling System 13
1.5.6 Preparation for Supply of Carbonated Water 13
1.5.7 Steps 13
1.6 Maintenance and Cleaning 14
1.6.1 General Principles of Cleaning 14
1.6.2 Cleaning and Disinfection 14
1.6.3 Maintenance 14
1.7 Principles of Secure Handling 15
1.1 Indications 16
1.2 Counterindications 16
1.3 Terms of Guarantee 17
1.4 Acceptance Criteria 17
2. TECHNICAL PARAMETERS 18
2.1 Transport and Operating Conditions 19
2.2 Applicable Standards 19

1. INSTRUCTIONS FOR USE

ALFA 10 - can be effectively used for whole-body therapeutic massage or massage of individual body parts. Massage is performed under water by a hose with a massage jet at the end. Therapeutic effect of this type of massage is based on simultaneous acting of mechanical and thermal effects. Combination of appropriate temperature of bath and water flow leads to release of the muscle tonus and to overall relaxation. The pressure of the water flow causes also reactive supply of muscular tissue with blood, using nervous and metabolic effects. Underwater massage is used in treatment of posttraumatic states, fractures, injuries of muscles and joints, in insufficient blood circulation in extremities, in ischial, spastic and weak paralysis and in treatment of obesity. Significant effects of this type of hydrotherapy manifest themselves also in overall physical recondition after large physical strain.

ALFA 20 - is used for air massage by a flow of compressed air from tiny jets at the bottom of the tub. Air bubbles rise through the bath and gently massage the skin and superficial subcutis by rubbing the body surface. This brings sedative effect which has beneficial influence on both mental and physical state of the patient because it releases him/her from pain and stress. Air massage is applied mostly in insomnia, neurosis and other neurological diseases, as well as in diseases of locomotive organs where again its hyperaemic effect is used. In addition the tub has a hand jet for underwater massage.

ALFA 30 - Serves for application of whole-body hydromassage whirlpool bath, with the possibility of manual underwater massage by the subaqual jet. The hydromassage effect is induced by air-supplied water flow from large side jets or from microjets which are ergonomically located against the most stressed areas of the spine and extremities. Hydromassage is very helpful in treatment of posttraumatic states and injuries of upper and lower extremities. Hydromassage whirlpool bath is an irritation and tonisation procedure and it is also a part of therapeutic physical education. It is effective in elimination of edemas, improvement of mobility of joints and release of contractures. It brings maximum overall relaxation of organism and therefore is optimal for spas, sanatoria, remedial institutions, sporting facilities and resorts of all kinds.

ALFA 40 - is a highly effective combined system of three-circuit hydromassage and four-circuit air massage together with pulsation for improvement of the final effect of hydrotherapy. The entire system is electronically controlled and thus enables the therapist to smoothly change its functions. In addition the tub is equipped with a classic hand jet for underwater massage.

This tub can perfectly satisfy the clinical needs of rehabilitation. It enables to provide the patient deep relaxation and physical relief of muscle tonus, effective treatment of locomotive organs in postoperative states, improvement of blood circulation at the body surface as well as in the internal organs. It is suitable for demanding facilities, hydrotherapy in spas, sanatoria, remedial institutions and well-appointed remedial institutions.

ALFA 50 - High-end product which thanks to electronic control and many available functions provides perfect hydromassage of the whole body or it individual parts as well as circuit-controlled air massage bath, or their combination. Besides a hand subaqual jet for classic underwater massage this tub is also equipped with the functions of lymphatic massage, pulsation and setting of the intensity of massage which enables to rotate smoothly the resting and massage modes. Owing to the available functions the tub meets the most demanding requirements for comprehensive hydrotherapy, from neurological diseases to treatment of posttraumatic and postoperative states, rehabilitation of extremities, arthroses and circulatory problems. It is designed especially for spas, remedial institutions, sanatoria and luxury hotels with professionally guided relaxation program.

1.1 OUTWARD APPEARANCE

Hydromassage tubs of the Alfa series are made of progressive and high-quality materials and equipped with top equipment the technology of which predestines it for long-lasting and trouble-free operation.

Construction height of the acrylate skeleton of the tub and the height of the bottom 200 mm above the floor enables use of hoists and lifts for immobile patients and reduces stress of the medical staff that do not need to bend too much at treatment of the patients.

Depending on the type, the tubs are equipped by up to 7 motors (4 pumps and 3 blowers) which provide hydromassage and air massage in several circuits with the needed pressure of the medium and with the possibility of pulsation or smooth variation of intensity.

Large enough and clearly organized control panel includes all needed controls which serve for secure and perfect operation of the whole hydromassage equipment. The tub is panelled by covering panels which are adjusted to the shape of the tub. The skeletons of tubs and control panels are supplied in various colours. The covering panels are supplied only in the standard white colour.

1.2 INDIVIDUAL TYPES AND EQUIPMENT OF ALFA TUBS

Alfa 10 – subaqual jet with the possibility of smooth setting of water pressure, analogue indicator of water pressure in the subaqual jet, thermometer.

Alfa 20 – subaqual jet with the possibility of smooth setting of water pressure, analogue indicator of water pressure in the subaqual jet, thermometer, four-circuit air massage, pneumatic control.

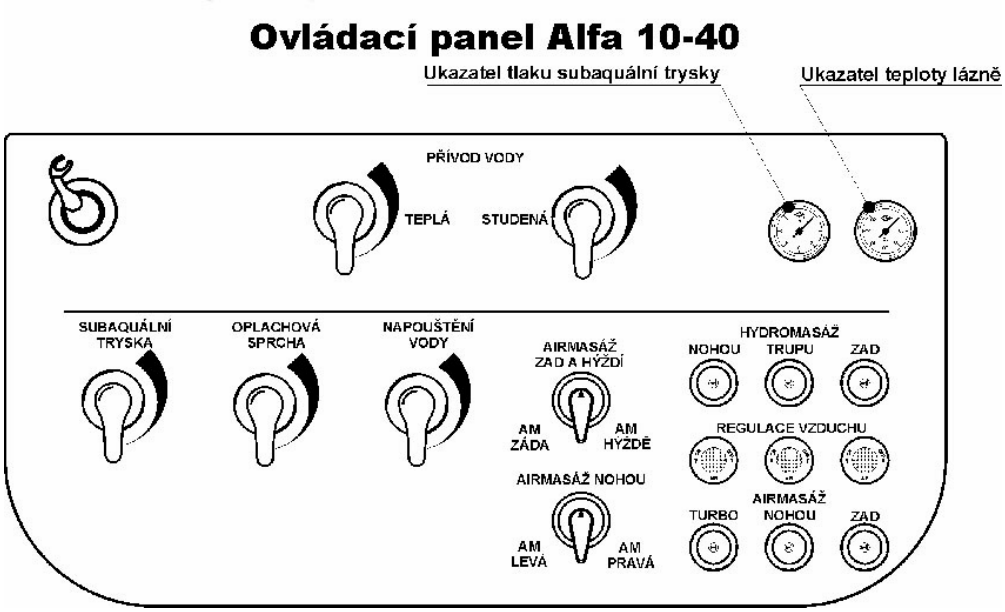
Alfa 30 – subaqual jet with the possibility of smooth setting of water pressure, analogue indicator of water pressure in the subaqual jet, thermometer, three-circuit hydromassage, air regulator of intensity (air-supply) of hydromassage, pneumatic control.

Alfa 40 – subaqual jet with the possibility of smooth setting of water pressure, analogue indicator of water pressure in the subaqual jet, thermometer, four-circuit air massage, setting of intensity of air massage, three-circuit hydromassage, air regulator of intensity (air-supply) of hydromassage, hydromassage pulsation, electronic control.

Alfa 50 – subaqual jet with the possibility of smooth setting of water pressure, four-circuit air massage, setting of intensity of air massage, lymphatic massage, three-circuit hydromassage, air-supply of hydromassage by a blower, hydromassage pulsation, electronic control with digital display of pressure in the subaqual jet, temperature of the supplied water and timer of the therapy time with automatic switch-off.

1.3 CONTROL ELEMENTS

1.3.1 CONTROL PANEL ALFA 10-40



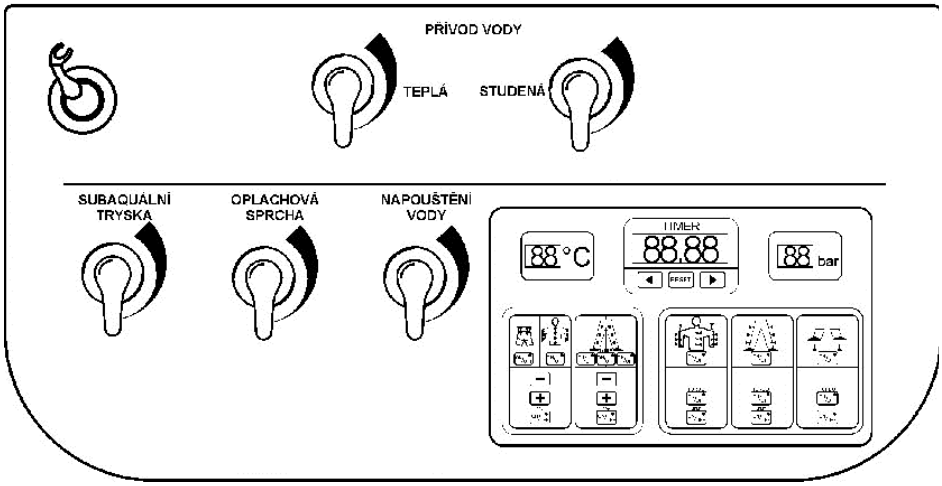
The above displayed panel belongs to the tub Alfa 40. The lower types have only some of the displayed controls, depending on the implemented functions. The principle of control is the same or very similar for all types of tubs.

Control and operation are intuitive and very comfortable.

- Water supply – divided into cold and warm water.
- Indicators of water temperature and pressure in the subaqual jet.
- Subaqual jet – starting of the pump and control of pressure in the subaqual jet.
- Rinse shower – tap for the rinse shower which is located in the upper left corner of the control panel and serves for rinse of the interior of the tub skeleton after treating a patient.
- Filling – to start water filling
- Air massage of the back and buttocks – control element which enables to aim the air flow in the air massage system at individual body parts of the patient. Air massage can be run either separately for each body part or for both simultaneously.
- Air massage of legs - control element which enables to aim the air flow in the air massage system at right and left leg of the patient. Air massage can be run either separately for each leg or for both simultaneously.
- Air massage
    - the "TURBO" button serves for starting of a special blower which increases the pressure of air in the system and thus also the intensity of pearl massage
    - the "AM LEGS" button serves for starting of the circuit of pearl massage of legs
    - the "AM BACK" button serves for starting of the circuit of pearl massage of the back
- Hydromassage and Air regulation – at start of hydromassage the respective pumps switch on and force water in through the jets and microjets towards individual body parts of the patient. Air regulation enables to make air flow through the jets together with water.
- Hydromassage
    - the "HM LEGS" button serves for starting of the hydromassage circuit for legs
    - the "HM BODY" button serves for starting of the hydromassage circuit for the body
    - the "HM BACK" button serves for starting of the hydromassage circuit for the back

1.3.2 CONTROL PANEL ALFA 50

Ovládací panel Alfa 50



The control panel of the tub Alfa 50 includes controls for water supply, setting of temperature of the supplied water, starting and operation of underwater massage, operation of the rinse shower and the electronic control panel which provides comfortable control with digital display of pressure of underwater massage, temperature of the supplied water, intensity of air massage and time of therapy.

Control and operation are intuitive and very comfortable.

- Water supply – divided into cold and warm water.
- Subaqual jet – starting of the pump and control of pressure in the subaqual jet.
- Rinse shower – tap for the rinse shower which is located in the upper left corner of the control panel and serves for rinse of the interior of the tub skeleton after treating a patient.
- Filling – to start water filling
- Control panel – includes large enough display elements and control buttons for individual systems and massage circuits.

1.4 OPERATION OF ALFA 10-50 TUBS

1.4.1 FIRST START

After installation disinfect the tub (see **1.6.1 General Principles of Cleaning**) and rinse its interior by the hand shower. To start the hand shower open its tap on the control panel and press the lever on the shower by the thumb.

Before supply of water set the required temperature by the two taps for warm and cold water and then open the ball valve in the indicated direction.

After filling the Alfa 10-40 tub (the water top must be at least 2 cm above the highest microjet) select the required hydrotherapy.

Display elements of the Alfa 50 tub show the following values before water filling:

- Temperature in the supply system of the tub
- "TIMER" shows dashes: "----------"
- The part of underwater massage pressure shows dashes: "--------"

During supply of water there displays the current temperature of the mixed supplied water. When the water top reaches the first water level sensor there appears the zero value of underwater massage pressure. When the water top reaches the second sensor the preset therapy time is displayed and the tub makes an acoustic signal that there is enough water in the tub to start therapy.

1.4.2 CONTROL OF UNDERWATER MASSAGE ALFA 10-50

- Take the jet and dip it in water. Turn the lever of the valve of the subaqual jet in the indicated direction, the circulation pump motor starts running.
- The pump forces water from the piping to the subaqual jet for pressure water massage. By turning the valve regulate the intensity of massage. The water pressure in the subaqual jet can be simultaneously monitored on the manometer.

CAUTION: Never start the subaqual jet without water in the tub, otherwise the pump could be irreparably damaged !!!

1.4.3 CONTROL OF FOUR-CIRCUIT AIR MASSAGE SYSTEM ALFA 20 , ALFA 40

Air massage consists of the following circuits:

1. air massage jets for arms and back
2. air massage jets for buttocks
3. air massage jets for legs – left
4. air massage jets for legs – right

- To start air massage of lower extremities press the "AM LEGS“ button.
- To aim air massage at either right or left leg turn the lever switch (control valve of the air massage circuit).
- To aim air massage at both legs simultaneously set the lever switch in the central position.
- To start air massage of the back, forearms and buttocks press the "AM BACK“ button.
- To aim air massage at the area of the back and arms or at the area of the buttocks turn the lever switch (control valve of the air massage circuit).
- To run both circuits simultaneously set the lever switch in the central position.
- The system of four-circuit air massage with pneumatic control is implemented in the type Alfa 20.
- The type Alfa 40 has electronic control of the four-circuit system of pearl bath which in addition allows the pearl bath power to vary (i.e. increase and decrease) and thus adjusts the intensity of air massage.

Variation (pulsation) and regulation of intensity of air massage in type Alfa 40

- To start air massage of the selected circuit press once the respective button in the "AIRMASSAGE" group.
- To decrease the intensity of air massage press the "-" (minus) button, to increase press the "+" (plus) button.
- Second pressing of the same button activates variation of intensity.
- Third pressing of the same button switches air massage off.

1.4.4 CONTROL OF THREE-CIRCUIT HYDROMASSAGE SYSTEM ALFA 30 , ALFA 40

Hydromassage consists of the following circuits:

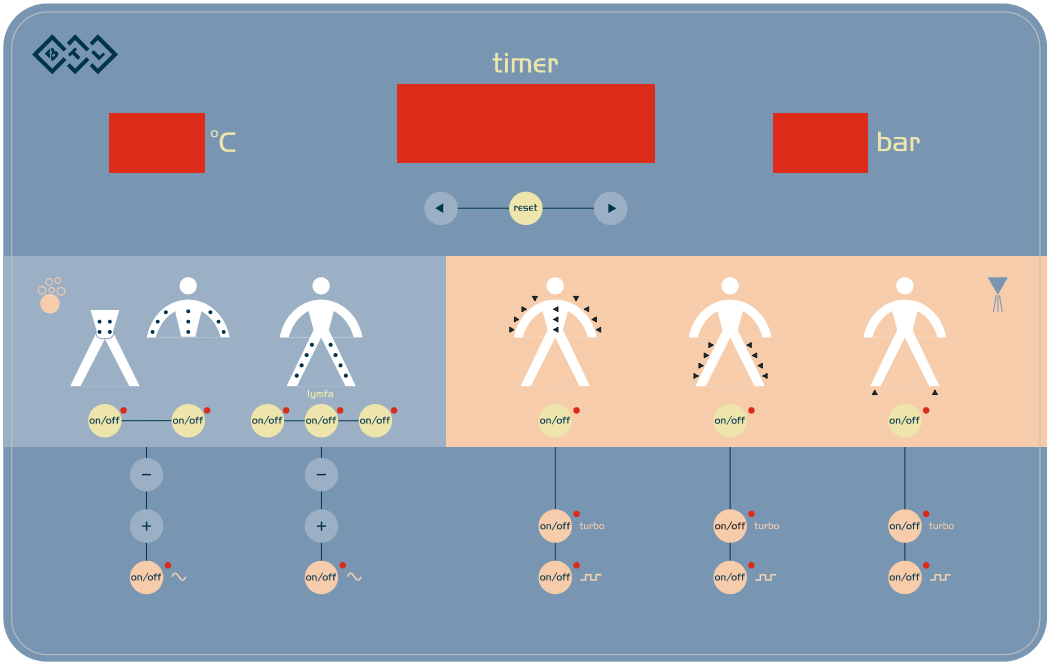
1. jets and microjets for hydromassage of the back
2. jets and microjets for hydromassage of the body
3. jets and microjets for hydromassage of the legs

- to start hydromassage of the back and forearms press the "HM BACK" button
- to start hydromassage of the body press the "HM BODY" button
- to start hydromassage of the legs press the "HM LEGS" button

1.4.5 "TURBO" FUNCTION - ALFA 40

The TURBO system enables strengthened air-massage of the body, which is used especially in cases of intensive posttraumatic rehabilitation. To start this function press the "TURBO" button once, second pressing of the button switches the TURBO function off.

1.4.6 CONTROL PANEL ALFA 50



The control panel of the Alfa 50 tub consists of three parts:

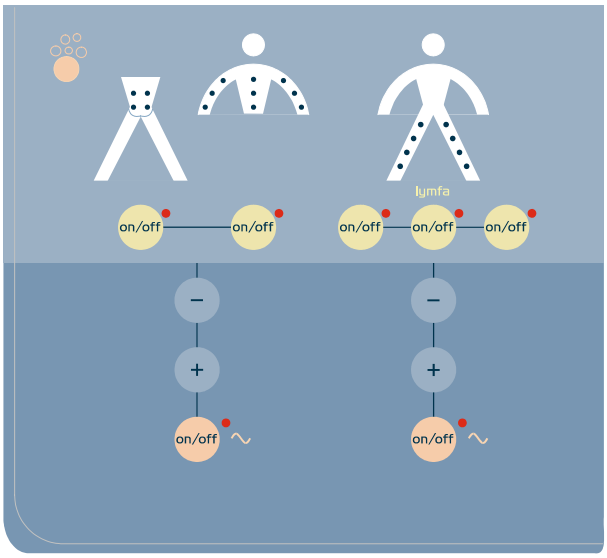
- Control of the four-circuit air massage system
- Control of the three-circuit hydromassage system
- Display elements

The control part of the four-circuit air massage system enables to switch the air massage system on and off, set intensity in individual circuits, start pulsation (variation) of air massage and start lymphatic massage with the possibility of setting the interval for periodically switched air massage jets.

The control part of the three-circuit hydromassage system enables to switch hydromassage on and off, control air-supply and control pulsation.

The display part includes three red LED displays, buttons for setting of the TIMER function and the RESET button for termination of all running therapies. On the multifunction displays it is possible to monitor the temperature of the supplied water, therapy time, intensity of air massage, interval of lymphatic massage and pressure of underwater massage.

1.4.7 CONTROL OF FOUR-CIRCUIT AIR MASSAGE SYSTEM ALFA 50



Air massage consists of the following circuits:

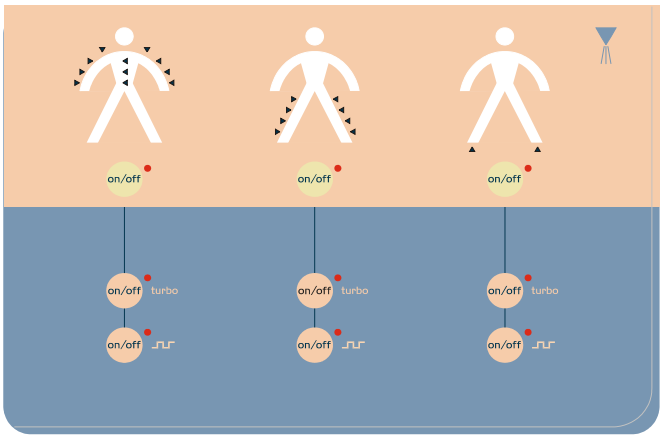
1. air massage jets for the buttocks
2. air massage jets for the arms and back
3. air massage jets for the legs – left
4. air massage jets for the legs – right

- To switch on the required air massage circuit press once the respective "On/Off" button under the picture of a figure with jets aiming at the buttocks, forearms and back or right and left leg.
- If air massage is active it is possible to regulate its intensity, i.e. increase or decrease, by the "+" and "-" buttons respectively. During regulation the intensity is displayed on the multifunction TIMER display. The range of intensity is from 30% to 100%.
- To start pulsation (variation) of air massage press once the "On/Off" button marked by the swung dash. Pulsation can be started if air massage is active.
- To start lymphatic massage press once the "On/Off" button. Lymphatic massage cannot be run if air massage of legs is active. After being switched on, the lymphatic massage system automatically switches over the air massage jets in the set intervals, gradually from the patient's foot soles to his/her waist. The interval can be set by the "+" and "-" buttons, at a change it is always shown on the display. The range of the interval is from 1 to 7.5 second.
- To switch off the required function press the respective "On/Off" button again.
- The active functions are indicated by the shining red LED beside the respective button.

1.4.8 CONTROL OF THREE-CIRCUIT HYDROMASSAGE SYSTEM ALFA 50

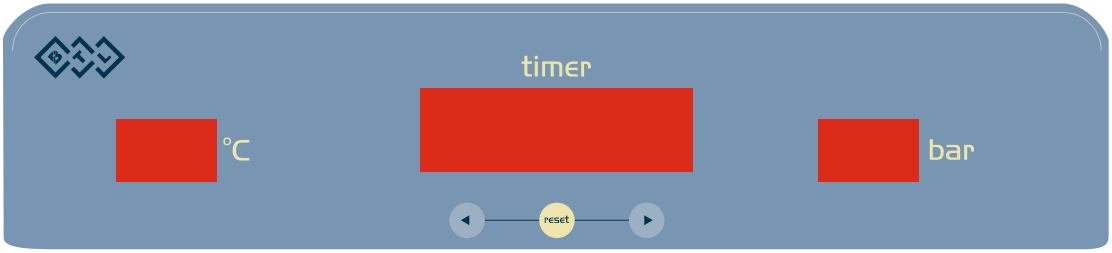
Hydromassage consists of the following circuits:

1. jets and microjets for hydromassage of the back and arms
2. jets and microjets for hydromassage of the legs
3. jets and microjets for hydromassage of the foot soles



- To switch on the required hydromassage circuit press once the respective "On/Off" button under the picture of a figure with jets aiming at back and arms, legs or foot soles .
- To start the blower to blow air in the selected hydromassage circuit (air-supply) press the "On/Off Turbo" button, which makes air flow through the jets together with water. This function can be started only if hydromassage is active.
- To start the hydromassage pulsation press the "On/Off" button with the "pulse" symbol. This function can be used if hydromassage is active, and can be combined with the "Turbo" function – in such case air flows intermittently through the jets together with water.
- To switch off the required function press the respective "On/Off" button again.
- The active functions are indicated by the shining red LED beside the respective button.

1.4.9 DATA ON THE DIGITAL DISPLAY ALFA 50



The display panel includes 3 buttons and 3 displays for the following values:

- Temperature of the supplied water, range 0-99°C
- Underwater massage pressure - subaqual jet, range 0-5 bar (1bar = 100 kPa)
- Air massage intensity, range 30-100%
- Time interval of lymphatic massage, range 1- 7.5 sec.
- Total therapy time – TIMER, range 0-59 min

- RESET button
- Arrow buttons

Temperature – temperature of water is measured in the inlet system, i.e. there is always displayed temperature of water being supplied. The unit of the displayed temperature is Celsius degree.

Subaqual jet pressure – after connection of empty tub to the electric circuit the display shows dashes "--------". When the water top reaches the first sensor, the zero pressure value is displayed. The unit of the displayed pressure is bar.

Air massage intensity – is displayed on the multifunction display labelled TIMER. The intensity is displayed at the moment of its change.

Time interval of lymphatic massage – is displayed on the multifunction display labelled TIMER. The interval is displayed at the moment of its change.

Therapy time – is displayed on the multifunction display labelled TIMER. Therapy time can be preset by two buttons. After selection and starting of any therapy this time is counted down. After the set time elapses all systems are switched off.

RESET button – this button serves for immediate switch-off of all systems, regardless of the set therapy time.

1.5 OPTIONAL SUPPLEMENTARY SYSTEMS AND ACCESSORIES

1.5.1 DISINFECTION

At the customer's request the tub can be equipped with the disinfection system. This system consists of the control button, vessel with inlet for the disinfectant and precise electronic dispenser.

After ending of the therapy press the disinfection button. The disinfectant is dispensed into the used water in the tub. Switch on all available systems (hydromassage and air massage) so that the disinfectant dissolves in water.

Let the disinfectant act for the time stated by its producer. Disinfectants are listed in chapter 1.6.2 Cleaning and Disinfection. After disinfection of the piping let water out and switch on air massage for 30 seconds so as to force water out of the air massage system.

The pipes and hydromassage pumps are so designed that all water from these parts also runs out when draining the tub.

1.5.2 LIGHT

The tub can be equipped with a light to illuminate the patient and thus help the staff in orientation during the underwater massage.

1.5.3 ELECTRIC HEATING

At the customer's request the tub can be equipped with 3 kW electric heating. This heating is designed to heat water up only by several degrees, to keep it on the constant temperature which is optimum for therapy.

The acrylate skeleton that the tub is made of has excellent thermal-insulating properties which ensure long-lasting constancy of the water temperature. In case that water is filled in the tub for a long time, this heating enables to reach the required temperature.

At the customer's request the heating system can be during installation of the tub set to the required temperature which will be automatically kept by the thermostat. The heating is dependent on the operation of the hydromassage circuit – to start heating first switch on the hydromassage circuit.

1.5.4 FILTRATION

In some locations there occur problems with mechanical impurities which are released in the water mains. The best solution is to equip the main inlet to the building by the filter for mechanical impurities which must be designed accurately for the site (size of mechanical particles and maximum flow). If the filters cannot be installed on the inlets there should be a filter installed in the hydromassage circuit which will automatically filter water after switch-on of hydromassage.

It is necessary to check these filters periodically and change the filter cartridge when needed. The interval depends on the disposition and state of water mains.

1.5.5 PREPARATION FOR CONNECTION TO RECYCLING SYSTEM

When being manufactured the tubs can be adapted for connection to the system of water recycling. These tubs are equipped with special system for filling and draining of recycled water.

Recycling system usually consists of two recycling tanks where the used water is monitored and purified so as to comply with valid hygienic standards. Recycling is very demanding as for space and water piping, so it is necessary to take it into account already in the construction design.

1.5.6 PREPARATION FOR SUPPLY OF CARBONATED WATER

When being manufactured the tubs can be adapted for connection to the carbonating machine. These tubs are equipped with special system for filling and intake of carbonated water.

1.5.7 STEPS

With the tub there can be delivered steps for facilitation of access to and from the tub. The steps are designed to make the access to the tub manageable both for tall and small patients.

The steps consist of two stands with nonslip surface. They are made of aluminium which makes them stable as well as easily manipulable, especially thanks to low weight. The white glazed coating highlights their elegant design and enables trouble-free maintenance and disinfection.

The steps can be delivered without handrails or with the right or left one.

1.6 MAINTENANCE AND CLEANING

1.6.1 GENERAL PRINCIPLES OF CLEANING

Foreign substances (paint, putty, etc.) on the tub surface remove carefully, best by a wooden spattle. Never use **steel wool, metallic sponges, knives or scouring washcloth**. Stains of oil or grease can be removed by **denatured alcohol**.

Never use strong solvents such as **acetone, paint thinners, benzine, ammonia or chloride agents, or abrasive polish**.

For metallic parts use special **milk or paste**, like for polishing of a car. Finally wash the cleaned parts by warm water and disinfect them by disinfectants approved by the responsible health officer.

1.6.2 CLEANING AND DISINFECTION

Regular cleaning after therapy

- After each therapy let water out by the red ball valve at the side of the tub, clean the tub by proper cleaner approved by the health officer (e.g. Chirosan by Bochemie s.r.o.) and rinse it by the shower.
- In the hydromassage system the used water automatically runs out of the hoses (the hoses decline to the outlet). The outflow from the pump is provided by a drain.
- To force the used water out of the air massage hoses let all air massage circuits run for at least 30 seconds. Within this time all water is perfectly forced out of the piping.
- The equipment's parts which come into touch with the patient should be cleaned by agents approved by the responsible health officer.

Regular cleaning and disinfection of piping 4x per month

Since pollution by mineral sediments and scale considerably affects the activity of internal parts of the system (piping, pump), it is necessary to clean and disinfect the tub regularly.

a) Fill the tub with warm water, like before bath.
b) Pour in the water the exact manufacturer-recommended amount of disinfectant (e.g. Savagro by Bochemie s.r.o.).
c) Run the system for approx. 15 – 20 minutes.
d) Let water out.
e) Fill the equipment with warm water and rinse the whole system.
f) Run the system for approx. 10 – 15 minutes.
g) Let water out.
h) To force the used water out of the pipes let all pearl bath circuits run for at least 30 seconds.

Special cleaning in case of use of non-standard water

If the tub is operated in a place with non-standard water (very hard water, mineral water, etc.) it is necessary to clean it and rinse the hydromassage system at least once a week. The frequency of cleaning depends on quality of water (can be found out by water analysis). For sediments use special agents for dissolution. In case of neglect of proper maintenance and cleaning, complaints will not be accepted.

1.6.3 MAINTENANCE

The service inspection including check of all parameters of the equipment and possible service actions must be performed in intervals complying with the valid law, not longer than 36 months. The inspection is performed by the BTL authorized service department on the basis of the user's order. If the inspection is not done in the stated term the manufacturer does not guarantee the technical parameters and safe operation of the product.

1.7 PRINCIPLES OF SECURE HANDLING

This device has applied parts of type B.

The equipment does not use any medicaments or other substances which would be its integral part or would be applied by means of it.

- Before first switch-on of the equipment read carefully the User's Manual.
- The equipment must be professionally installed by an authorized representative of BTL.
- Installation and service instructions are not included in this Manual.
- All staff to use the equipment must be instructed of the way of operation, maintenance and checking of the equipment and of the safety principles.
- The electrical cabling which the equipment will be connected to must be installed and tested according to the existing valid standards (IEC 364). If you are not sure that the mains are completely OK get them inspected by an inspection engineer.
- Check if the parameters of the mains correspond to the requirements of the equipment according to Chapter 2
- The equipment is designed for work in the environment defined in Chapter 2. It must not be used in explosive environment. The equipment must not be used in connection with inflammable anaesthetics or oxidizing fluids (O_2, N_2O, etc.).
- Inspect the equipment thoroughly before each use (surface of the tub, functions of displays and controls, etc.); in case of any inconsistency stop using the equipment and contact the authorised service department. If the equipment's behaviour differs from the function described in this Manual stop using the equipment and contact the authorised BTL service department.
- If the equipment shows any defect or if you have doubts about its correct function, terminate the therapy immediately. If you do not determine the source of uncertainty after thorough study of the Manual, contact the authorised service department. If the equipment is used out of accord with this Manual or is used even if it shows functional differences from this Manual, the user is responsible for the damages caused by the equipment!
- Do not dismantle the equipment in any case, removal of protective covers implies the danger of electrical injury.
- All material and parts which come into direct contact with the patient's body must comply with the respective standards related to irritability, allergization, toxicity, genotoxicity and carcinogeneity (ISO 10993-1, ISO 10993-3, ISO 10993-5). The user is responsible for all these materials and parts if not supplied by the BTL equipment supplier.
- The equipment does not use or produce any toxic substances during its operation, storage or transport under the stated conditions.
- Before start of therapy check if all set parameters correspond to your intents.
- To terminate therapy press the respective control element, not the mains switch.
- The equipment and the accessories must not be used in a way out of accord with this User's Manual.
- At work with the equipment use the recommended protective tools.
- The equipment must be placed out of reach of children.
- Main switch use for: switching on and off in operational breaks
  at repairs and service
  at weekend downtimes
  in case of need of fast shut-down
- Do not add to the bath any liquid agents or powders, especially soaps, foams and oils, if not particularly designed for hydrotherapy systems.
- Do not leave persons with restriction in movements, mentally affected persons and children, unattended.
- Near the tub it is forbidden to use any portable electric device! Other electric devices in the room and their parts under voltage must be located and fixed so that they cannot fall into the bath!
- Put the tub into operation before the patient's entry – to prevent him/her from an unpleasant feeling at the first emission of water and air from the jets.
- Check the pressure of water in the subaqual jet. When underwater therapy runs at full power the water pressure can reach approx. 0.4Mpa, which is a value that could harm the patient in case of unprofessional handling.
- Do not start the equipment if the tub is not full of water, otherwise the water pump could be damaged.
- After filling up the tub all jets must be under water.
- Before starting of the motor check if there are not any undesired things such as cloth parts, sponges and anything that could be sucked into the pump, which would cause clogging of the pipe and reduction of power or even damage of the pump.
- The equipment contains components which could cause electromagnetic interference.
- It is recommended to separate the patients' rooms from the staff rooms so that the noise level in the staff rooms is reduced (unlike the patients, the staff is exposed to noise for approx. 8 hours a day). In addition it is suitable to

divide the room (at least by curtains) to separate parts, one therapy and one patient each. In case of need extend the anti-noise measures.

- If after many years of operation it is necessary to discard the hydrotherapy equipment it is necessary to contact a specialized company dealing with this activity, or the supplier or manufacturer who will advise you on the process of liquidation, or to discard of it in a way which is usual for this type of devices. The equipment does not contain any toxic materials which could harm the environment in case of normal way of liquidation.

1.1 INDICATIONS

Underwater massage

- Posttraumatic states in muscles and joints
- Post-poliomyelitis states
- Muscular atrophy
- Lumboischiadic syndrome
- Arthrosis
- Bechterev's Disease
- Burger's Disease
- Myalgia

Air massage

- Vasomotor neurosis, climacteric neurosis
- Insomnia
- Neurologic diseases
- Diseases of locomotive organs

Hydromassage

- Post-operative states, states after injuries of locomotive organs
- Muscular atrophy
- Post-poliomyelitis states
- Peripheral paresis
- Trophic changes in extremities

1.2 COUNTERINDICATIONS

The list of counterindications is the list of cases in which the manufacturer does not recommend application of the selected therapy. Indeed the professional workplaces who are aware of the possible consequences do not need to observe these listed counterindications – all responsibility for use of the therapy, however, lies with them.

Underwater massage

- Acute inflammations
- Haemorrhagic diathesis
- Tumours in skin and subcutis
- Pregnancy
- States after heart attack, cardiovascular disorders
- Hypertension above 200/100mmHg
- Kidney diseases
- Varixes, post-trombophlebitis states, states after ulcus cruris
- Active TB

- Allergy to therapeutic salts used in the bath
- Menstruation
- Skin wounds (including non-bleeding)
- Eczema

Air massage

- Active TB
- Allergy to therapeutic salts used in the bath
- Menstruation
- Skin wounds (including non-bleeding)
- Eczema

Hydromassage

- Active TB
- Allergy to therapeutic salts used in the bath
- Menstruation
- Skin wounds (including non-bleeding)
- Eczema

1.3 TERMS OF GUARANTEE

The manufacturer provides guarantee 24 months from the date of delivery of the hydromassage tub. The guarantee expires if the equipment has been used out of accord with this Manual or in case of an unqualified intervention in the equipment. The guarantee does not apply to mechanical damage of the skeleton and panelling of the tub, neither to damage of the pump caused by incorrect handling (operation without water). In case of any defect always contact the authorized BTL service department.

Installation of tubs must be done by qualified personnel with BTL accreditation. In case of "amateurish" installation the supplier does not guarantee for the installation part of the hydromassage equipment and the defects connected with unprofessional installation. Guarantee does not apply for these defects.

1.4 ACCEPTANCE CRITERIA

When accepting the tub check if:

- the skeleton, frame and panelling of the hydrotherapy tub are not mechanically damaged and are completely OK
- the tub does not leak – there are no marks of water on the control panel and under the tub
- all hydrotherapy subsystems and their control are functioning and trouble-free

2. TECHNICAL PARAMETERS

Type	Alfa 10	Alfa 20	Alfa 30	Alfa 40	Alfa 50
Material of the skeleton	Acrylate	Acrylate	Acrylate	Acrylate	Acrylate
Maximum volume of the tub [l]	450	450	450	450	450
Usable volume of the tub [l]	375	375	375	375	375
Time of filling [min]	5	5	5	5	5
Time of drainage [min]	3	3	3	3	3
Weight without water [kg]	I50	I63	I67	I84	I94
Underwater massage with water pressure indicator	x	x	x	x	x
Hydromassage system (whirlpool)	-	-	x	x	x
Number of water jets	-	-	8	8	8
Number of microjets	-	-	24	24	24
Air-supply of hydromassage jets	-	-	x	x	x
Hydromassage pulsation	-	-	-	x	x
Air massage system (pearl bath)	-	x	-	x	x
Number of air massage jets	-	54	-	54	54
Regulation of intensity	-	-	-	x	x
Air massage system with intensity variation (pulsation)	-	-	-	x	x
Lymphatic massage	-	-	-	-	x
Rinse shower	x	x	x	x	x
Power supply	230V/50Hz	230V/50Hz	230V/400V 50Hz	230V/400V 50Hz	230V/400V 50Hz
Optional systems and accessories					
Disinfection	o	o	o	o	o
Heating 3kW	-	-	o	o	o
Filtration	-	-	o	o	o
Preparation for connection to recycled water	o	o	o	o	o
Supply of carbonated water	o	o	o	o	o
Steps	o	o	o	o	o

"x" – standard, "o" – optional "-" – no

	Alfa 10	Alfa 20	Alfa 30	Alfa 40	Alfa 50
Power supply					
max. input	1550VA	4100VA	5000VA	9100VA	9350VA
mains voltage ~ 198 V to 252 V (230 V nominal), alternating	Yes	Yes	Yes	Yes	Yes
frequency 50 Hz	Yes	Yes	Yes	Yes	Yes
protection class I (according to IEC 536)	Yes	Yes	Yes	Yes	Yes
Internal chemical sources	No	No	No	No	No
Display elements					
7-segment display	No	No	No	No	Yes
Classification					
applied parts of type	B	B	B	B	B
class according to MDD 93/42/EEC	IIb	IIb	IIb	IIb	IIb

2.1 TRANSPORT AND OPERATING CONDITIONS

Identification BTL-3000 Series System

Operating conditions

ambient temperature	+ 10 °C to + 40 °C
relative humidity	30 % to 75 %
atmospheric pressure	700 hPa to 1060 hPa
position	on legs
type of operation	continuous

Transport and storage conditions

ambient temperature	- 10 °C to + 55 °C
relative humidity	25 % to 85 %
atmospheric pressure	650 hPa to 1100 hPa
position	on legs
storage time	max. 1 year
other conditions	transport only in the supplied packaging

2.2 APPLICABLE STANDARDS

No.	Name	IEC, EN, ISO, MDD
1	Medical electrical equipment Part 1: General requirements for safety	IEC 601-1
2	Amendments to IEC 601-1	A2, A11 a A12
3	Medical electrical equipment Part 1: General requirements for safety 2. Collateral Standard: Electromagnetic compatibility. Requirements and tests	IEC 601-1-2
4	Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55011
5	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test - Basic EMC Publication	IEC 61000-4-2
6	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 3: Radiated, radio frequency, electromagnetic field immunity test	IEC 61000-4-3
7	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transients/burst immunity test - Basic EMC Publication	IEC 61000-4-4
8	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 5: Surge immunity test	IEC 61000-4-5
9	Medical devices - Risk Analysis	EN 1441
10	Biological evaluation of medical devices - Part 1: Evaluation and testing	ISO 10 993-1
11	The Medical Devices Directive 93/42/EEC	MDD 93/42/EEC

Manufacturer

MEDICAL TECHNOLOGIES, s.r.o.
Heleny Malirove 11
169 00 Praha 6
Czech Republic

Representative:

BTL Industries Limited
Suite 401 Albany House
324-326 Regents Street
London
WIB 3BL
United Kingdom

tel: +4420 8371 2267
fax: +4420 8371 2270
email: btl@cobus.net

Sales Department

BTL, s.r.o.
Heleny Malirove 11
169 00 Praha 6
Czech Republic
Tel.: (420) 220 517 012, 220 514 753
Fax: (420) 220 515 520
E-mail: sales@btlnet.com
http://www.btlnet.com

© All rights reserved. No part of this manual may be reproduced, saved in a research centre or transferred by any means incl. electronic, mechanic, photographic or other records without previous approval from MEDICAL TECHNOLOGIES, s.r.o.

BTL is a registered trademark of MEDICAL TECHNOLOGIES, s.r.o.

MEDICAL TECHNOLOGIES, s.r.o operates a policy of continuous development. Therefore, it reserves the right to make changes and improvements to the Product described in this manual without prior notice.

The contents of this document are provided "as is". Except as required by applicable law, no warranties of any kind, either expressed or implied, are made in relation to the accuracy, reliability or contents of this document. MEDICAL TECHNOLOGIES, s.r.o reserves the right to revise this document or withdraw it at any time without prior notice.